As a consequence, there is a difference in amplifier gain ($K_V = R_{feedback} / R_{input}$) control. In the Applicants' circuit, $K_V = R_{DS} / R_i = (1/R_i) R_{DS}$, where R_{DS} is a function of V_{GS}, so that there is a linear dependence between K_V and R_{DS}. Pechstein, in contrast, discloses that $K_V = R_f / R_{DS}$, which is a *non*linear dependence between K_V and R_{DS}.

(2) V_{GS} is analogous to the Applicants' output signal V_{out} (Fig. 3) which is measured at the output of the amplifier. In Pechstein, V_{GS} is the drain potential.

The consequence of this difference is in the circuit loading during measurement. In the Applicants' case, the circuit (the operating point for the ISFET) is not loaded during measurements. In the case of Pechstein, to keep inaccuracy levels at ± 0.1 μA, the input resistance of the voltmeter, used for measurements, must be greater than 10 megohms.

(3) Finally, the Applicants have replaced a "floating" Zener diode by a ***summing*** amplifier, while Pechstein still uses a Zener diode for the reference voltage.

Respectfully submitted,

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